

Atty. Docket No. YOR920010266US2
(590.071)

Amendments to the Specification:

Since the Amendments to the Specification listed in the Amendment After Final dated June 13, 2005 were not entered, the specification has been amended from its prior form dating back to the Amendment dated October 26, 2004.

Please replace the paragraph that begins at Page 1, lines 10, with the following amended paragraph:

BDDs are effectively deployed in many EDA (Electronic Design Automation) tools, in particular in the area of formal verification. A plethora of public domain BDD packages is available on the web (see Meinel, Ch. Wagner, A., "WWW.BDD-PORTAL.ORG", Proc. IEEE IWLS [Institute of Electrical and Electronics Engineers; International Workshop on Logic and Synthesis], pp. 341-348, 2000; <http://www.bdd-portal.org>).

Please replace the paragraph that begins at Page 2, line 10, with the following amended paragraph:

Other disadvantages have been observed in connection with prior efforts. Long 1998, *supra*, does not address dynamic variable ordering. The BDDs as implemented in earlier versions of SMV (Symbolic Model Verifier) (see K. L. McMillan, Symbolic Model Checking, Kluwer, 1993), do not use node reference counts; a mark-sweep garbage collector is used. For variable reordering an algorithm by R. Rudell (R. Rudell, "Dynamic variable ordering for ordered binary decision diagrams", Proc. ICCAD, pp. 42-47, 1993) is employed, but SMV does excessive BDD traversals to calculate accurate

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live node counts because no explicit reference counts are used. A package called ABCD (Biere, Armin, ABCD: a compact BDD library, <http://www.inf.ethz.ch/personal/biere/projects/abcd> [http colon backslash backslash www dot inf dot ethz dot ch backslash personal backslash biere backslash projects backslash abcd](http://www.inf.ethz.ch/personal/biere/projects/abcd), 2000) focuses on compactness of representation (only 8 bytes per node) and uses indices to achieve this. It does not take advantage of the node order and does not offer dynamic variable ordering. Also its memory management is rather rigid.

Please replace the paragraph that begins at Page 22, line 9, with the following amended paragraph:

Two sets of experiments are presented here. They were run on an IBM 200MHz Power3 machine. First it is shown how a BDD package in accordance with the present invention compares to CUDD 2.3.0 (see F. Somenzi, "CUDD: CU Decision Diagram Package Release", <ftp://vlsi.colorado.edu/ftp> [ftp colon backslash backslash vlsi dot colorado dot edu backslash](ftp://vlsi.colorado.edu/ftp), 1998). Next the results are shown for some industrial designs comparing the new package to the existing pointer-based package (by the same author). In Figure 4, the CPU time in seconds for *CUDD* (bars) and *BDD* (spikes) is plotted for the 48 DLX2 benchmarks, prepared by Velev, Miroslav N., "Superscalar Suite 1.0", <http://www.ece.cmu.edu/~mvelev> [http colon backslash backslash www dot ece dot cmu dot edu backslash tilda mvelev](http://www.ece.cmu.edu/~mvelev), 1999, in trace form (see Yang, *supra*).